Service Manual

Supplementi

RF-6300LBS

FM-LW-MW-SW Multi-Band Receiver with Phase-Locked-Loop Synthesizer

Main change.

* Change of Circuit Board.

How to Distinguish the model between RF-6300LBS and RF-6300LBS supplement-1.

* The suffix is changed from A to C.





IF:

SPECIFICATIONS

LW/MW/SW1

Frequency Range: 150~410kHz (2000~732 m)

MW 520~1610kHz (577~186 m)

SW1, 1.6~3.9 MHz (187~76.9 m)

Single Superhèterodyne with Type:

Phase-Locked-Loop Synthesizer

455 kHz

S/N 6dB S/N 26 dB Sensitivity: 600μV/m LW 70μV/m

400 μV/m MW 30μV/m SW1 30 µV/m 400μV/m

(Modulation 400Hz, 30% for 50mW)

 ± 2.5 kHz (-6dB) WIDE Selectivity:

± 15kHz (-60dB)

NARROW ± 1.7kHz (-6dB)

±6kHz (-60dB)

LW 45 dB (at 280 kHz) Image Interference Ratio:

MW 40 dB (at 1000 kHz) SW1 50 dB (at 2.8 MHz)

SW2~5

SW2 3.9~7.0 MHz (76.9~42.9 m) Frequency Range:

SW3 7.0~12.0 MHz (42.9~25 m) SW4 12.0~20.0 MHz (25~15 m) SW5 20.0~30.0 MHz (15~10 m)

Double Superheterodyne with Type: Phase-Locked-Loop Synthesizer

1 st IF 2.6 MHz

IF: 2nd IF 455 kHz

S/N 26 dB S/N 6 dB Sensitivity:

SW2 1.2μV 12_µV SW3 0.8 µV $8\mu V$ 10 µV SW4 1.0 µV SW5 1.0 µV 10 µ V

(Modulation 400 Hz, 30% for 50 mW)

WIDE $\pm 2.5 \text{ kHz} (-6 \text{ dB})$ Selectivity:

± 15 kHz (-60dB)

NARROW \pm 1.7 kHz (-6 dB) ±6 kHz (-60dB)

Image Interference Ratio: . SW2 65 dB (at 5.5 MHz)

SW3 60 dB (at 9.5 MHz) SW4 55 dB (at 16 MHz) SW5 45 dB (at 25 MHz)

FM

87.5~108 MHz Frequency Range:

Single Superheterodyne with Type:

Phase-Locked-Loop Synthesizer

IF: 10.7 MHz

 $2\mu V/75\Omega$ (-3 dB, Limit. Sens.) Sensitivity:

 $2.5 \mu V / 75 \Omega$ (S/N 26 dB) 70 dB (± 400 kHz)

Two-Signal Selectivity: 50 dB (at 98 MHz) Image Interference Ratio:

Frequency Display

7-Segment Fluorescent Tube Display Type:

Direct Readout to 1 kHz for AM Precision:

Direct Readout to 10 kHz for FM

Number of Figures:

5 digits

Within 100 Hz during any 60 minutes Frequency Stability:

after warm-up

Tuning

Click-Stop, Rotary Encorder Type:

Digital Tuning

Tuning Speed Ratio:

Fast:Slow = 10:1

Preset Memory

Number of Preset:

12-Station Preset

Clock

Type:

LCD Quartz Clock

Real-Time (Hour, Minute, Second) Function:

Display Alarm Time (Hour Minute)

Display Doze Sleep

Wake-up to Radio or Chirp Alarm

Sleep/Alarm Cancel

Monthly Difference \pm 15 seconds. Precision:

(16°C temperature, 50% humidity)

General Specifications

IC 17 Semi-conductors:

> Transistor 87 FET 8

4 W (DC; MAX.)

Output Power: 4W (AC, MPO)

12cm (8Ω)

Speaker: AC 110~125/220~240V, 50/60 Hz Power Source:

9V (6 x UM-1, "D")

6V (4 x UM-3, "AA") ... Back-up

for Memory & Clock

DC in 9V

Power Consumption:

Jacks:

Weight:

15 W

Earphone/External Speaker (3.5φ)

Headphones (6ϕ)

Rec out/Phono (DIN Type)

AC in DC in

FM/SW Whip Antenna 1010 mm Antennas:

LW/MW Ferrite Core Antenna

10ø x 180 mm SW1 Ferrite Core Antenna 10φ x 100 mm

FM/LW/MW/SW

External Antenna (one-touch)

435 x 281 x 131 mm Dimensions (W x H x D):

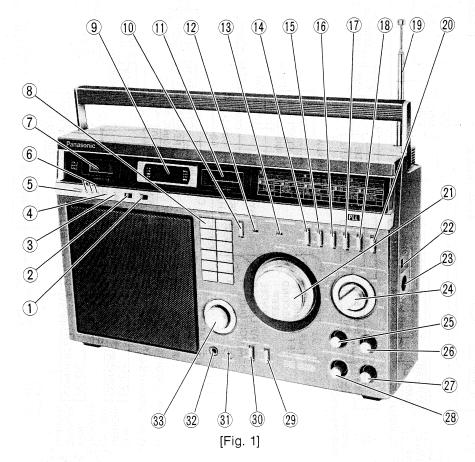
(17-1/8 x 11-1/16 x 5-3/16)

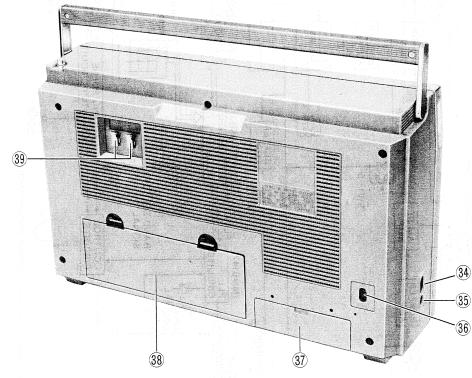
5.2 kg (11 lb. 7.4 oz)

without batteries

Specifications subject to change without notice.

LOCATION OF CONTROLS

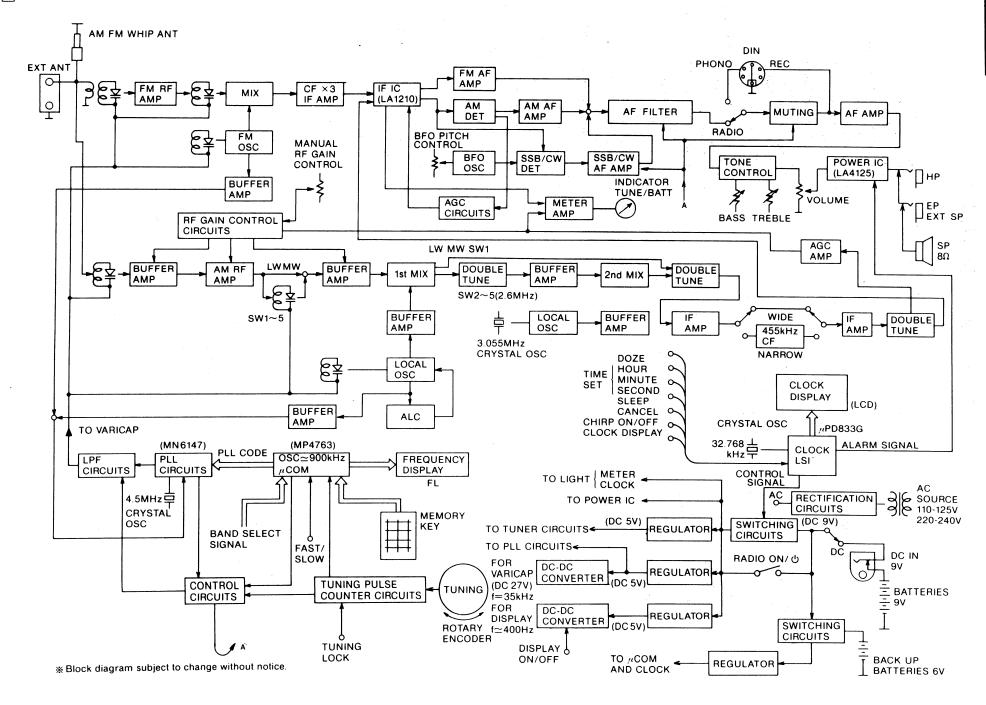




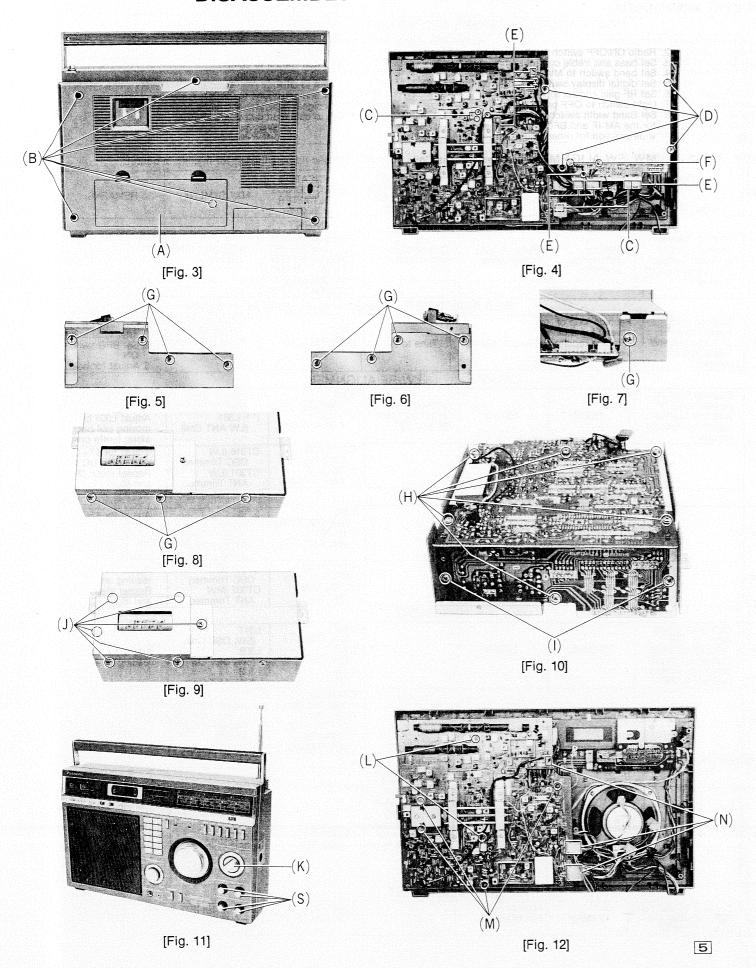
[Fig. 2]

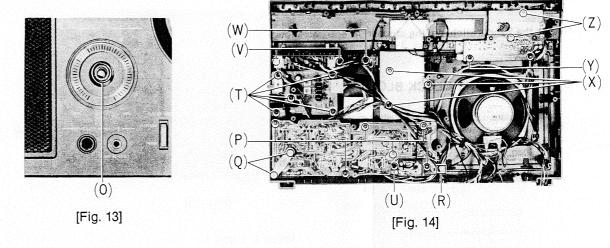
- ① Clock Display Selector (Time/Sec/Alarm)
- Chirp Switch
- ③ Sleep/Alarm Cancel Button
- 4 Sleep Set Button
- ⑤ Doze Button
- ⑥ Time Set Button (H/M/S)
- ⑦ Clock Display
- 8 Preset Channel Button
- 9 Digital Frequency Display
- ① Cancel/Memory Button
- ① Tuning/Battery Meter② Memory Indicator
- (3) Operation Indicator
- Tuning Speed Selector (Fast/Slow)
- 15 Tuning Lock Switch
- 16 Light Switch
- 1 Digital Frequency Display Switch
- Auto Switch
- 19 Telescopic Antenna
- 20 Radio Switch
- 2 Tuning Control
- Radio/Phone Selector
- 23 DIN Connector Jack
- **Band Selector** $(\mathsf{FM/LW/MW/SW_1/SW_2/SW_3/SW_4/SW_5})$
- Bass Control
- 26 Treble Control
- D LW/MW/SW RF Gain Control
- 28 BFO Pitch Control
- 29 BFO On/Off Switch
- 39 Band Width Selector (Narrow/Wide)
- 3 Earphone/External Speaker Jack (Imp 8Ω only)
- Headphones Jack
- 3 Volume Control
- 34 AC Socket
- 35 DC IN Jack
- AC Voltage Selector
- Clock/Memory Back-up Battery Compartment
- 38 Main Battery Compartment
- 39 External Antenna Terminal

BLOCK DIAGRAM



DISASSEMBLY INSTRUCTIONS





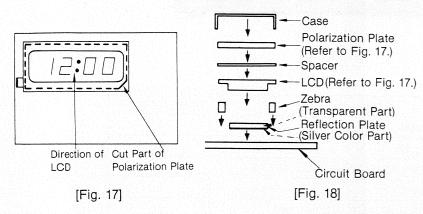
Procedure	To remove —.	Remove —.	Shown in Fig. —
1		Battery cover (A) x 1	3
2	Rear Cabinet Ass'y	Screw (3 x 35)(B) x 6	3
3		Cocket (CS16, CS10, TM101, TM102)(C) x 4	4
4		Red Screw (3 x 12) (D) x 4	4
5	PLL Block	Socket (CS 18, 17, 15, 14, 7, 3, TM1, TM7, TM103, 104)(E) x 10	4
6		Unsolder (F) x 2	4
7	PLL Circuit Board	Screw (3 x 6)(G) x 12	5~8
8	(3.4 UP)	Screw (3 x 6) (H) x 6	10
9		Screw (3 x 6)	10
10	Frequency Counter	Screw (3 x 6) (J) x 6	9
11		Band Knob (K) x 1	11
12	Tuner Circuit Board (IUP)	Red screw (3 x 12) (L) x 2	12
13		Red screw (3 x 12) (M) x 4	12
14		Socket (CS2, 5, 6)(N) x 3	12
15		Volume knob & Nut (O) x 1	13
16	Control Circuit Board	Red screw (3 x 12) (P) x 6	14
17	(2UPa)	Screw (3 x 35) (Q) x 2	14
18		Socket (CS8)(R) x 1	14
19		Knob(S) x 4	11
20	DIN Jack Circuit Board (7 UP)	Screw (3 x 12) (T) x 5	14
21	Headphone Jack Circuit Board (2 UPe)	Screw (3 x 12)(U) x 1	14
22	Switch Circuit Board (2UPb)	Screw (3 x 12)(V) x 2	14
23	LED Circuit Board (2UPd)	Screw (3 x 12) (W) x 1	14
24	Channel/Memory Circuit Board (2UPc)	Screw (3 x 12) (X) x 3	14
25	Clock/Clock Adjust	Screw (3 x 6)(Y) x 2	14
26	Circuit Board (6UP)	Screw (2.3 x 8)(Z) x 2	14

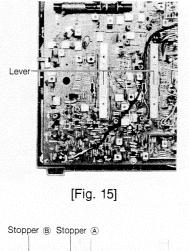
■ HOW TO ASSEMBLE THE BAND SWITCH ASS'Y

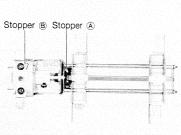
- 1. When fix the Band switch Ass'y, set the switch Lever in the direction of arrow as shown in Fig. 15, and set Band switch rotate switch shaft counter-clockwise.
- 2. When assemble the Band switch, set the stopper (A) & (B), as shown in Fig. 16.

■ HOW TO ASSEMBLY THE CLOCK BLOCK

- 1. Note that polarization plate, LCD and reflection plate must be installed under the specified conditions as shown in Fig. 17 and 18.
- 2. Before replacing with new polarization plate, LCD and reflection plate remove the sheet cover of then.

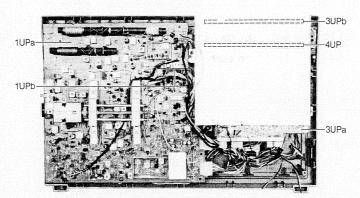




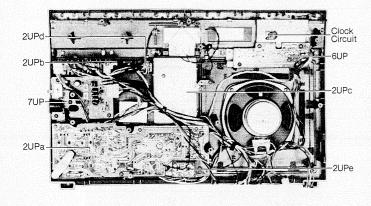


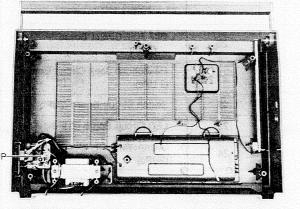
[Fig. 16]

1UPa	Tuner Circuit Board
1UPb	Meter Circuit Board
2UPa	AF Circuit Board
2UPb	Switch Circuit Board
2UPc	Key Board Circuit Board
2UPd	LED Circuit Board
2UPe	Headphone Jack Circuit Board
3UPa	Control Circuit Board
3UPb	Frequency Display Circuit Board
4UP	PLL Circuit Board
5UP	Power Circuit Board
6UP	Switch Circuit Board (Clock)
7UP	DIN Jack & Filter Circuit Board



[Fig. 19]





[Fig. 20]

[Fig. 21]

ALIGNMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set volume control to maximum
 Radio ON/OFF switch to ON.
- Set bass and treble control to maximum.
- 4. Set band switch to MW, LW, SW or FM.
- 5. Set digital display switch to OFF position.6. Set RF gain control to Maximum.7. Light switch to OFF position.
- Set Band width switch to narrow position for the AM-IF and BFO adjustmet, and to
- wide position for other adjustment.
- 9. Set BFO switch to ON position for BFO adjustment.
- and to OFF position for other adjustment. Set BFO Pitch control to center.

- 11. Radio/Phono switch to radio.
 12. Auto switch to OFF.
 13. Set power source voltage to 9V DC.
 14. Output of signal generator should be no higher than necssary to obtain an output reading.

■ LW. MW. SW ALIGNMENT Note: Antenna Coils and Trimmers should be adjusted for maximum output.

E	BAND	SIGNAL GENE SWEEP GEN		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER	ADJUSTMENT	REMARKS
L		CONNECTIONS	FREQUENCY		or SCOPE)		
				AM-2nd IF	ALIGNMENT		
	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz 30% Mode. at 400Hz	Point of non- interference.	Output meter across voice coil.	T203 (AM 1st IFT) T207 (AM 2nd IFT) T208 (AM 3rd IFT) T201 (AM 4th IFT) T202 (AM 5th IFT) T103 (AM 6th IFT)	Adjust for maximum output.
				BFO ALI	GNMENT Not	e: Set band width swit	tch to "Narrow".
	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1000kHz	Tune to signal.	Audio output from speaker.	L203 (BFO OSC Coil)	 Cut off moduration after tune to signal. Set BFO switch to ON. Adjust for beat.
				LW-RF AL	IGNMENT		
	LW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	150kHz	150kHz	Connect DC VTVM between	L314 (LW OSC Coil) (*1) L301 (LW ANT Coil)	Adjust for 1.5±0.1V reading on DC VTVM. Adjust L301 by moving coil bobbin along ferrite core.
	LW	"	400kHz	400kHz	"	CT316 (LW OSC Trimmer) CT301 (LW ANT Trimmer)	Adjust for 17±0.3V reading on DC VTVM. Repeat steps (3) and (4).
				MW-RF AI	_IGNMENT		
	MW	"	550kHz	550kHz		L316 (MW OSC Coil) (*1) L301 (MW ANT Coil)	Adjust for 1.5±0.1V reading on DC VTVM Adjust L301 by moving coil bobbin along ferrite core.
	MW	"	1500kHz	1500kHz	, "	CT317 (MW OSC Trimmer) CT302 (MW ANT Trimmer)	Adjust for 17.5±0.2V reading on DC VTVM. Repeat steps (5) and (6).
				SW ₁ -RF A	LIGNMENT		
	SW ₁	Connect to test point to through ceramic capacitor (10 pF). Negative side to test point	1.6MHz	1.6MHz	"	L317 (SW ₁ OSC Coil) L308 (SW ₁ DET Coil) L303 (SW ₁ ANT Coil)	Adjust for 1.5±0.1V reading on DC VTVM.
	SW ₁	"	3.9MHz	3.9MHz	"	CT318 (SW ₁ OSC Trimmer) CT309 (SW ₁ DET Trimmer) CT303 (SW ₁ ANT Trimmer)	Adjust for 17±0.3V reading on DC VTVM. Repeat steps (7) and (8).
	(*1) Ce	ment antenna bobbin	with wax after cor				
				SW 1st LOCA	L ALIGNMENT		
	SW ₂		<u> </u>	Point of non-interference.	Connect RF VTVM between and Connect Frequency Counter between and	L204 (SW 1st OSC Coil)	 Adjust L204 to a poi which is 0.2~0.3dB below the value at which the peak valu was shown on the RF Vol tmeter. Adjust L204 for 3.055M Hz reading of Frequency Counter.
					ALIGNMENT		
))	SW ₂	Connect to test point. Negative side to test Point.	2.6MHz	Point of non- interference.	"	T204 (AM 1st IFT) T206 (AM 1st IFT)	Adust for maximum output.

7

SW2-RF ALIGNMENT

SW₃-RF ALIGNMENT

SW4-RF ALIGNMENT

SW₅-RF ALIGNMENT

Connect DC

VTVM between

3.9MHz

7MHz

7MHz

12MHz

12MHz

20MHz

20MHz

30MHz

RADIO DIAL

SETTING

87.5MHz

90.5MHz

106MHz

108MHz

Point of non-

interference

L318

(SW₂ OSC Coil) L309

(SW₂ DET Coil) L304

(SW₂ ANT Coil)

OSC Trimmer)

DET Trimmer)

ANT Trimmer)

(SW₃ OSC Coil)

(SW₃ DET Coil) L305

(SW₃ ANT Coil)

CT321 (SW₃ OSC Trimmer)

DET Trimmer)

ANT Trimmer)

(SW₄ OSC Coil) L312

(SW₄ DET Coil) L306

(SW₄ ANT Coil)

CT322 (SW₄ OSC Trimmer)

DET Trimmer)

CT307 (SW₄ ANT Trimmer)

L322 (SW₅ OSC Coil) L313

(SW₅ DET Coil)

(SW₄ ANT Coil)

CT323 (SW₅ OSC Trimmer)

CT314 (SW₅

DET Trimmer) CT308 (SW₅

ANT Trimmer)

ADJUSTMENT

T101 (FM IFT)

T102 (FM IFT)

L104

L101

L102

(Secondary)

(FM OSC Coil)

(FM DET Coil)

(FM ANT Coil)

CT101 (FM DET Trimmer)

ANT Trimmer)

CT102 (FM

CT103 (FM OSC Trimmer)

(Primary)

L307

INDICATOR

(VTVM or SCOPE)

amp. of scope to test point ?. Negative side to

Connect vert.

test point 👽

Connect DC

VTVM between

7 and E.

FM-RF ALIGNMENT

CT313 (SW₄

CT312 (SW₃

CT306 (SW₃

L321

CT319 (SW₂

CT311 (SW₂

CT304 (SW₂

L319

Adjust for $3 \pm 0.1V$

reading on DC VTVM.

Adjust for 17±0.3V reading on DC VTVM. Repeat steps (11)

Adjust for 3±0.1V reading on DC VTVM.

Adjust for 17±0.3V

and (14).

reading on DC VTVM. Repeat steps (13)

Adjust for 5±0.1V reading on DC VTVM.

Adjust for 15±0.3V

Repeat steps (15)

Adjust for 6±0.1V

Adjust for 15±0.3V

Repeat steps (17)

REMARKS

amplitude. (Refer to fig. 23.)

(Refer to fig. 24.)

amplitufe.

VTVM.

Adjust for maximum

Adjust for maximum

(*2) Adjust for $3.0\pm$ 0.1V reading on DC

maximum output.

(*2) Adjust for 11± 0.5V reading on DC

 $(3) \sim (6)$.

VTVM. Repeat steps.

9

(*2) Adjust for

and (18).

reading on DC VTVM.

reading on DC VTVM,

and (16).

reading on DC VTVM.

Connect to test point through ceramic

capacitor (18PF).

Negative side to test point

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)

(1)

(2)

(3)

(4)

(5)

(6)

SW₂

SW₂

SW₃

SW₄

SW₄

SW₅

SW

BAND

FM

FΜ

FM

■ FM ALINMENT

3.9MHz

7MHz

7MHz

12MHz

12MHz

20MHz

20MHz

30MHz

FREQUENCY

10.7MHz

87.5MHz

90.5MHz

106MHz

108MHz

(*2) Three output responses will be preset; proper tuning is the center frequency

SIGNAL GENERATOR or

SWEEP GENERATOR

CONNECTIONS

Connect to test point 1 through

0.001μF. Negative

Connect to test point through FM dummy antenna. (Refer to

fig. 25).

side to E.

1. RAD

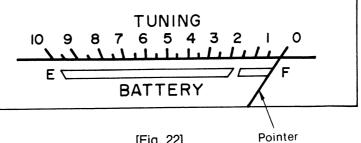
Set band switch to MW.

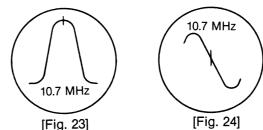
Set volume control MIN.

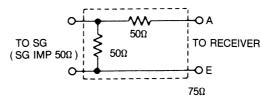
pointer of meter says • Set Phono/Radio switch to Radio. as shown in figure, 22. Set power source voltage to 9.8 volts DC.

• Frequency Display switch to ON.

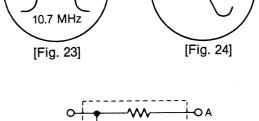
Light switch to OFF.





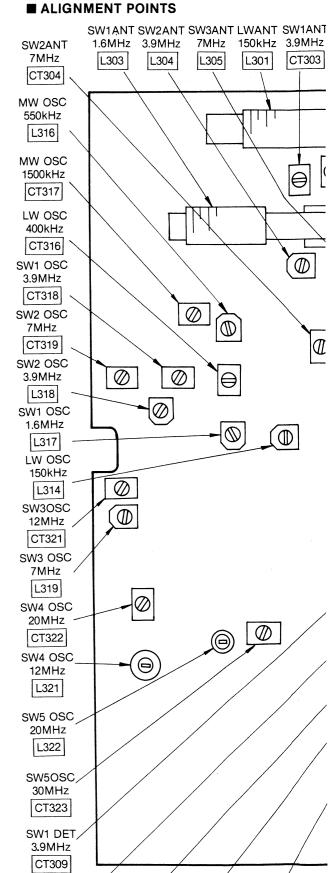


[Fig. 22]



[Fig. 25] FM Dummy Antenna

BATT METER ADJUSTMENT		■ ALI
ADIO RECEIVER SETTING	2. REMARKS	
Set band switch to MW.	 Adjust VR101 so that the 	



SW3 DET

12MHz

CT312

SW2 DET

3.9MHz

L309

SW3DET

7MHz

L311

SW4 DET S

12MHz

L312

10

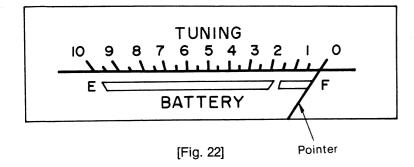
■ TUNE/BATT METER ADJUSTMENT

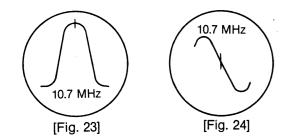
- 1. RADIO RECEIVER SETTING Set band switch to MW.
- Set volume control MIN.
- pointer of meter says as shown in figure, 22. • Set Phono/Radio switch to Radio.

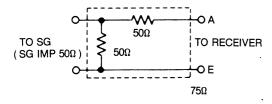
2. REMARKS

· Adjust VR101 so that the

- Set power source voltage to 9.8 volts DC.
- Frequency Display switch to ON.
 Light switch to OFF.

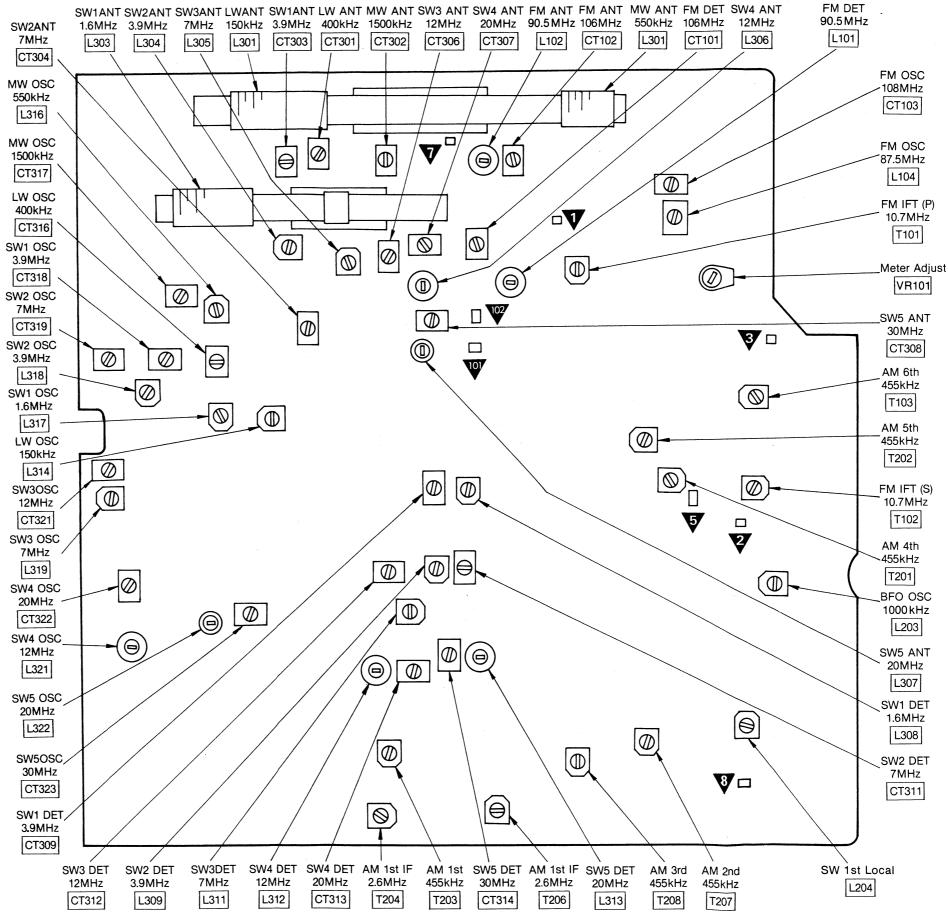






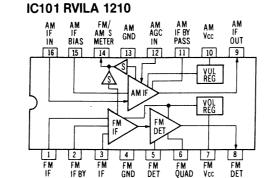
[Fig. 25] FM Dummy Antenna



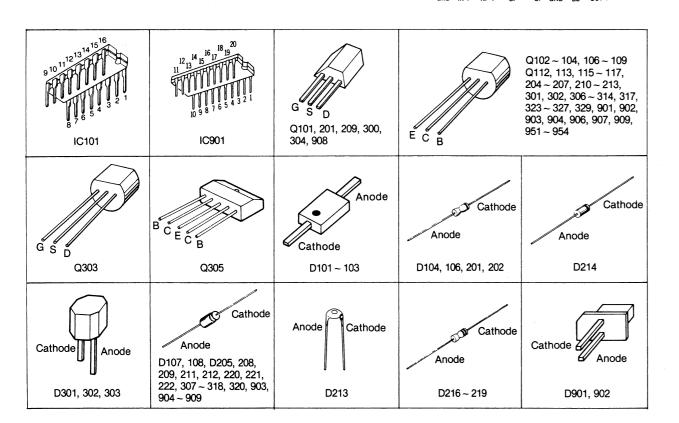


RF-6300LBS

Notes:	
1 S1	. Radio ON/OFF switch in "OFF (())" position.
2 S2-1 S2-2	. Auto ON/OFF switch in "OFF" position.
2.02-1,02.2	Display ON/OFF switch in "OFF" position.
4.64	Light ON/OFF switch in "OFF" position.
4. 54	Light On/OFF Switch in OFF position.
5. S5	. Tuning Lock ON/OFF switch in "OFF" position.
6. S6	. Tuning speed Slow/Fast switch in "slow" position.
7. S7	. AC voltage selector switch in "220 ~ 240 V" position.
8. S8	. Power supply AC/DC switch in "AC" position.
9 59-1 59-2	. BFO ON/OFF switch in "OFF" position.
10 \$10.1 \$10.2	. Band width Wide/Narrow switch in "Wide" position.
	. Radio/Phono switch in "Radio" position.
	. hadio/Filono switch in hadio position.
12. S301-1 ~ S301-6,	
S302-1 ~ S302-6	. Band selector switch in "FM" position.
	(1SW5, 2SW4, 3SW3, 4SW2, 9SW1,
	10MW, 11LW, 12FM)
13 The mark (♥) shows	s test point. e.g, ▼ = Test point 1.
	ements are taken with electronics voltmeter from
negative terminal of	
•	
	()AM position, []LW position,
< >SW5 position	n, [[]]…BFO ON position, ≪ >…SW4 position.

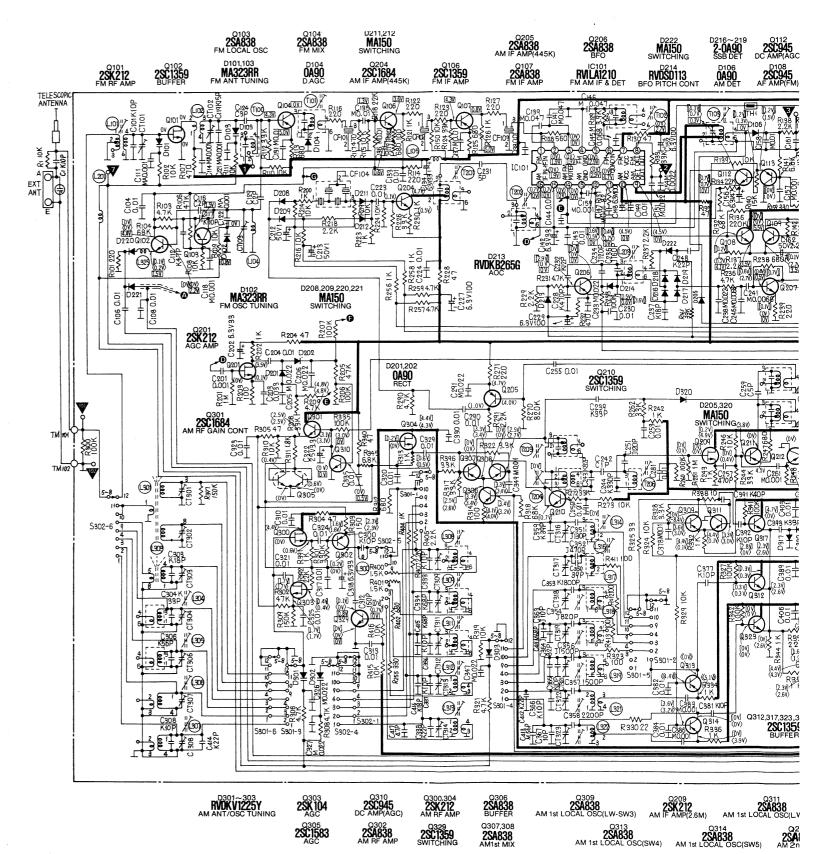


IC901 RVILA 4125 IN 2 NF 2 CP CP BS OUT 2 GND II 15 II 17 II 18 II 16 OUTPUT OUTPU

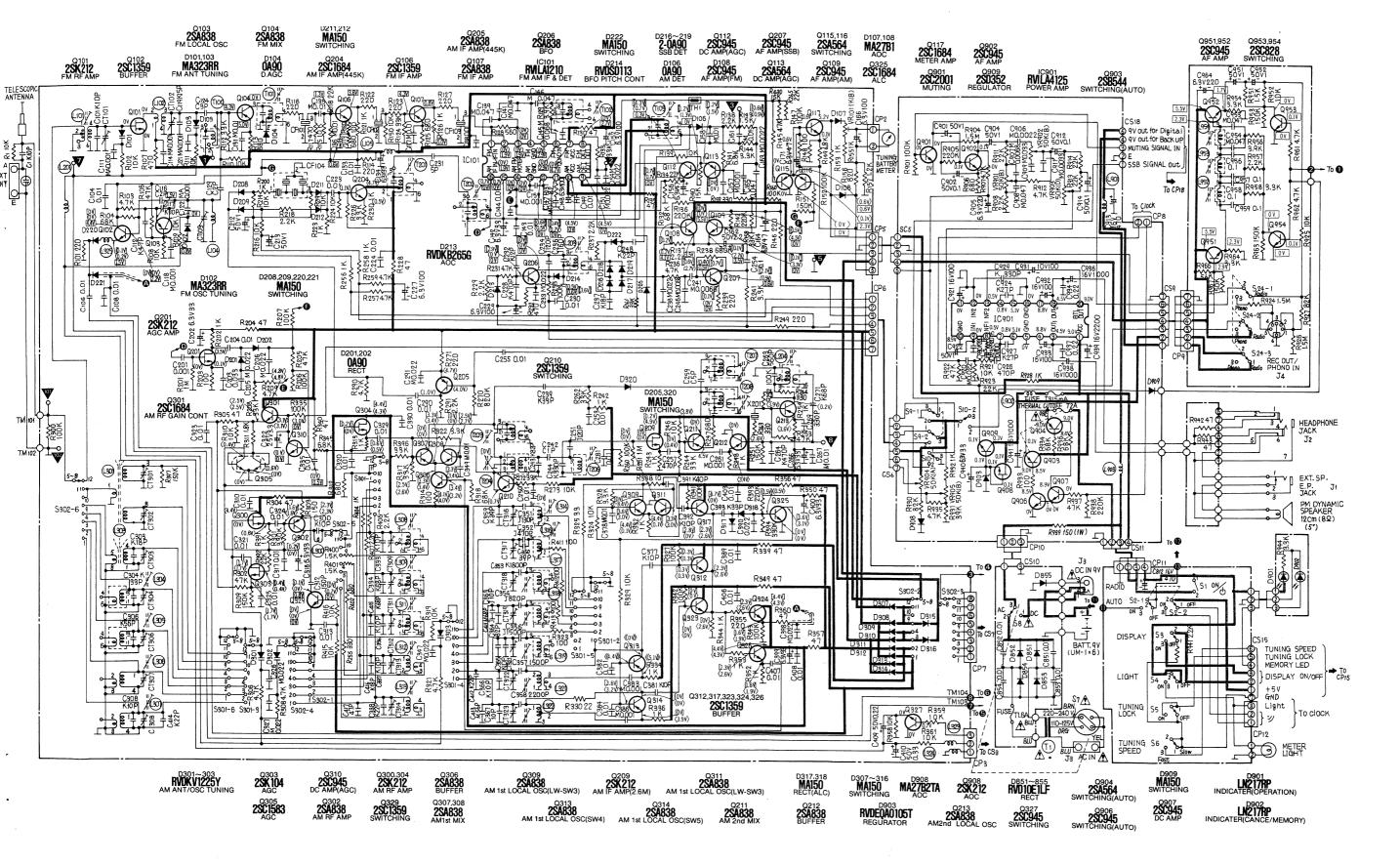


12

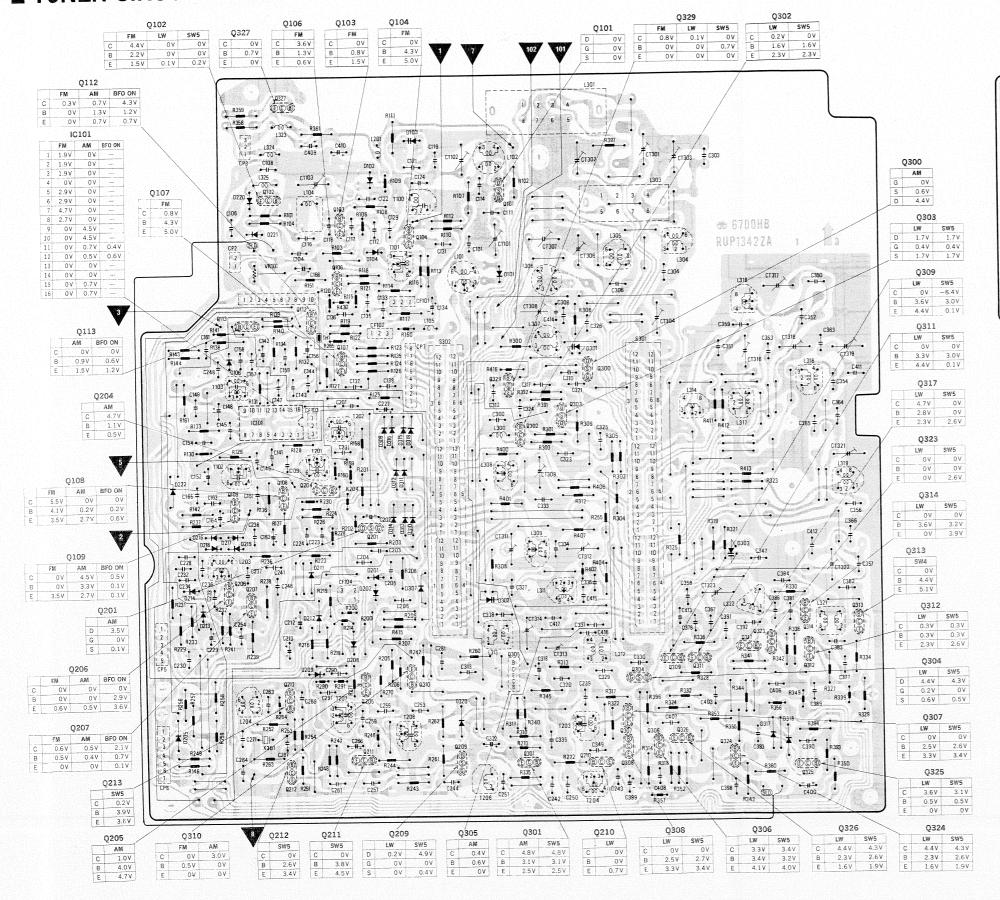
SCHEMATIC DIAGRAM (TUNER, AF, DIN JACK & FILTER, SWITCH, MI



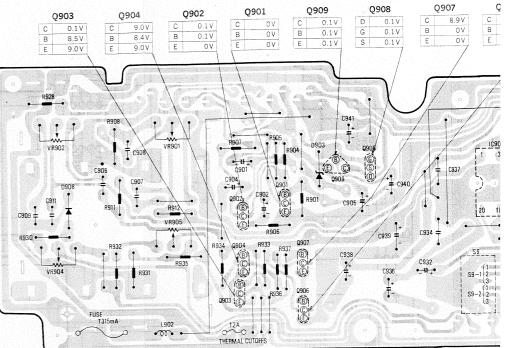
SCHEMATIC DIAGRAM (TUNER, AF, DIN JACK & FILTER, SWITCH, METER, LED, HEADPHONE JACK, POWER CIRCUIT BOARD



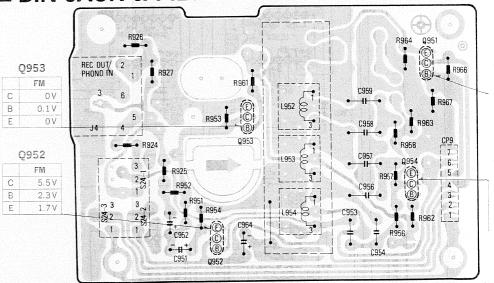
■ TUNER CIRCUIT BOARD



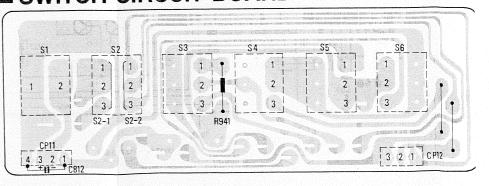
■ AF CIRCUIT BOARD



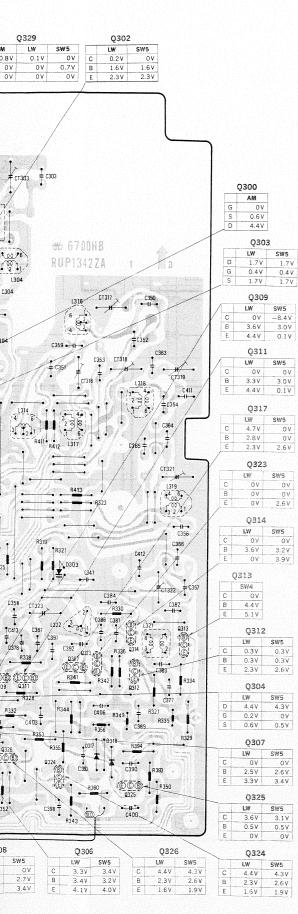
DIN JACK & FILTER CIRCUIT BOARD

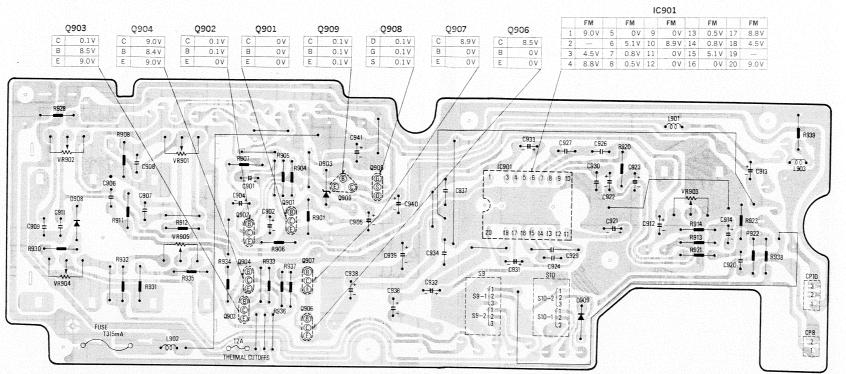


SWITCH CIRCUIT BOARD

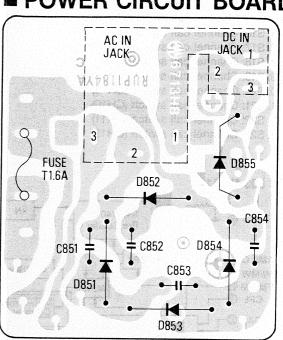


AF CIRCUIT BOARD

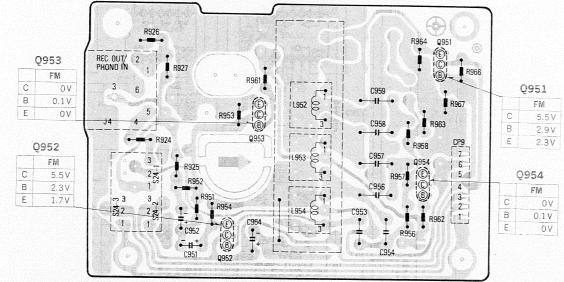




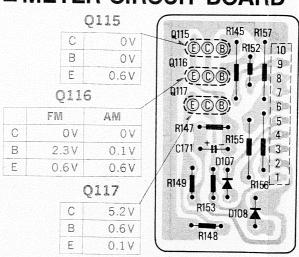
■ POWER CIRCUIT BOARD



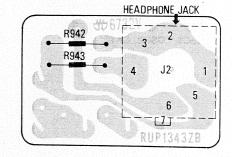
■ DIN JACK & FILTER CIRCUIT BOARD



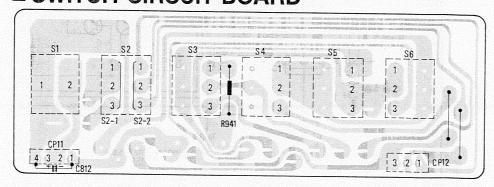
■ METER CIRCUIT BOARD



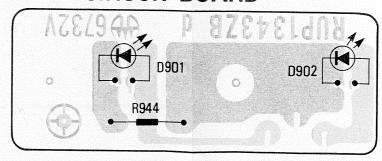
■ HEADPHONE JACK CIRCUIT BOARD



SWITCH CIRCUIT BOARD



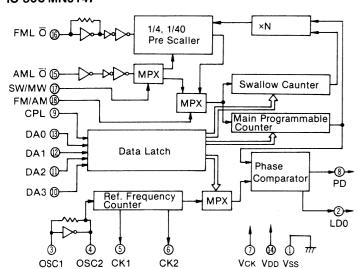
■ LED CIRCUIT BOARD

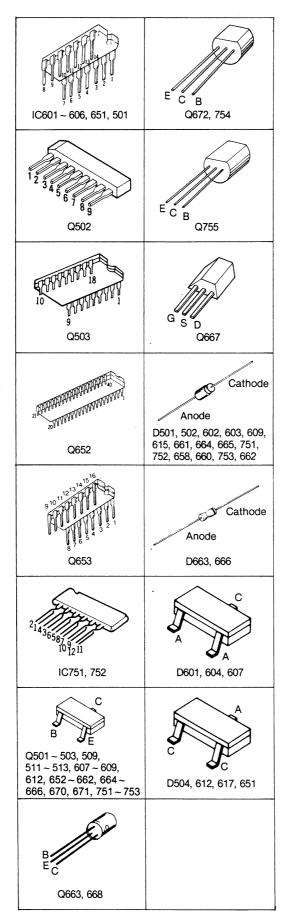


Notes:

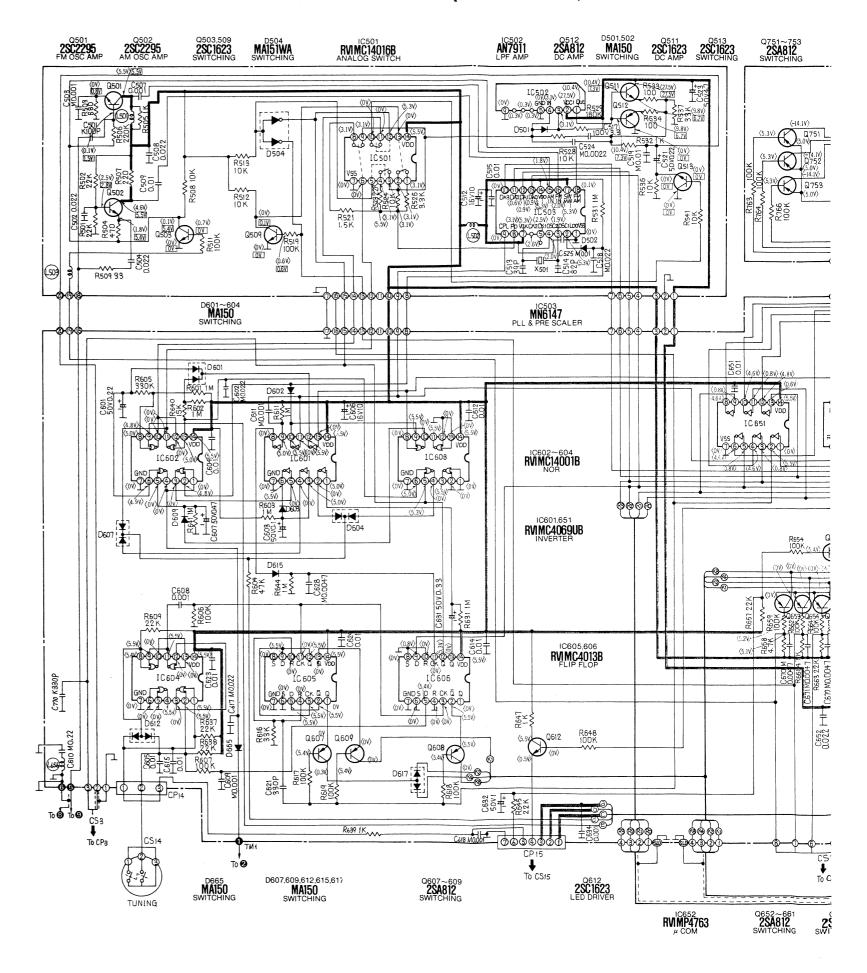
- 1. S11: Memory switch.
- 2. S12: Channel call switch (CH 1)
- 3. S13: Channel call switch (CH 2)
- 4. S14: Channel call switch (CH 3)
- 5. S15: Channel call switch (CH 4)
- 6. S16: Channel call switch (CH 5)
- 7. S17: Channel call switch (CH 6)
- 8. S18: Channel call switch (CH 7)
- 9. S19: Channel call switch (CH 8)
- 10. S20: Channel call switch (CH 9)
- 11. S21: Channel call switch (CH10)
- 12. S22: Channel call switch (CH11)
- 13. S23: Channel call switch (CH12)

IC 503 MN6147





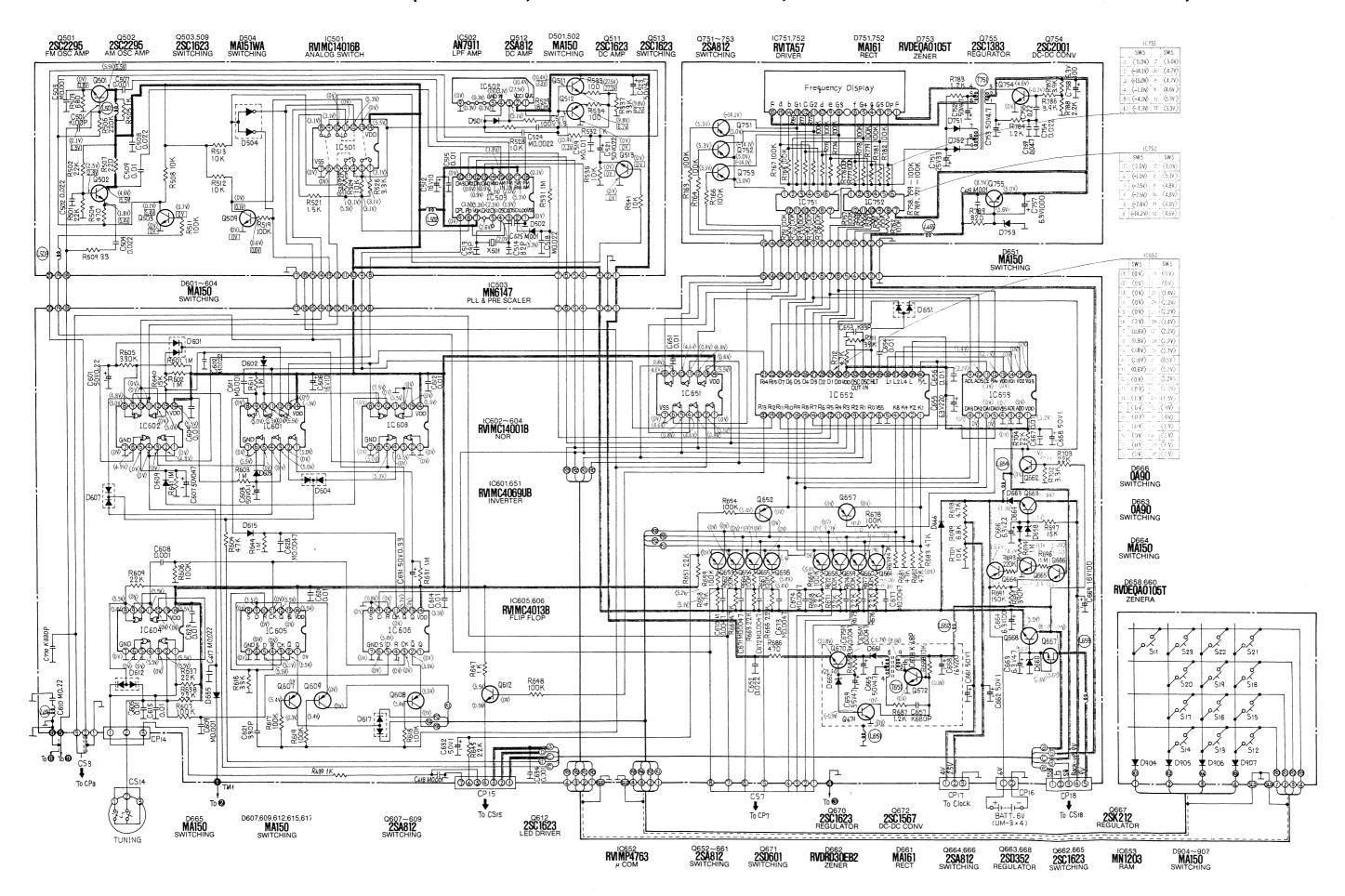
SCHEMATIC DIAGRAM (CONTROL, FREQUENCY DISPLA



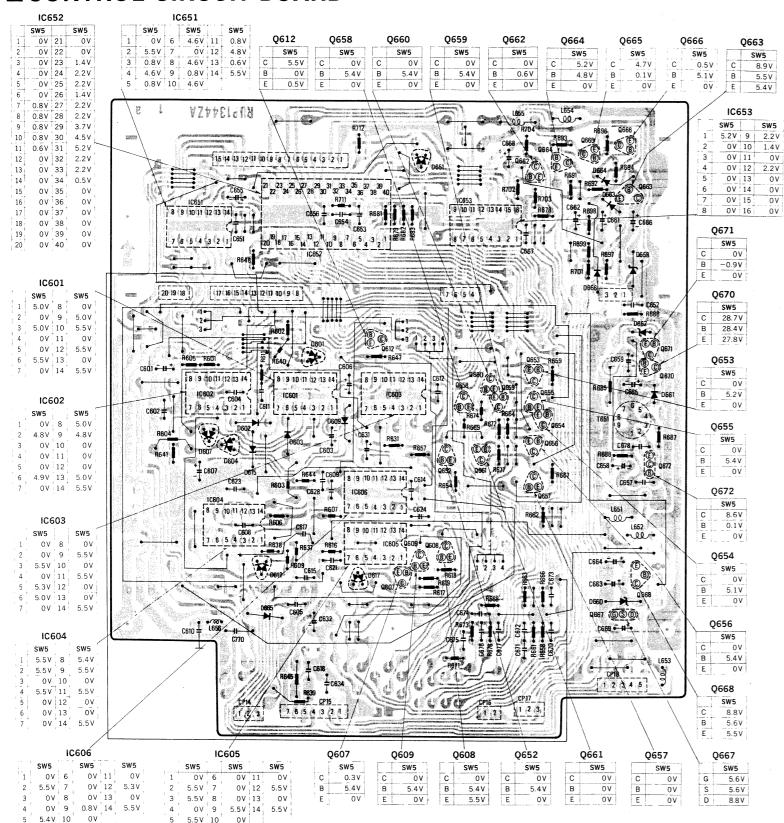
RF-6300LBS RF-6300LBS

SCHEMATIC DIAGRAM (CONTROL, FREQUENCY DISPLAY, PLL & KEY BOARD CIRCUIT BOARD)

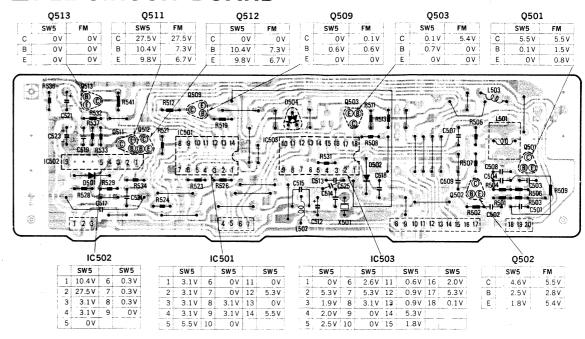
RF-6300LBS



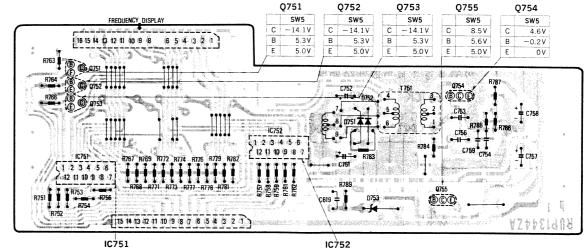
■ CONTROL CIRCUIT BOARD



■PLL CIRCUIT BOARD

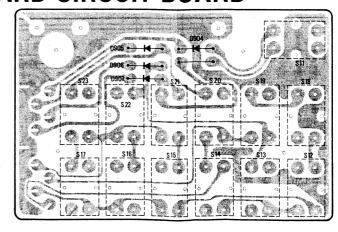


■ FREQUENCY DISPLAY CIRCUIT BOARD

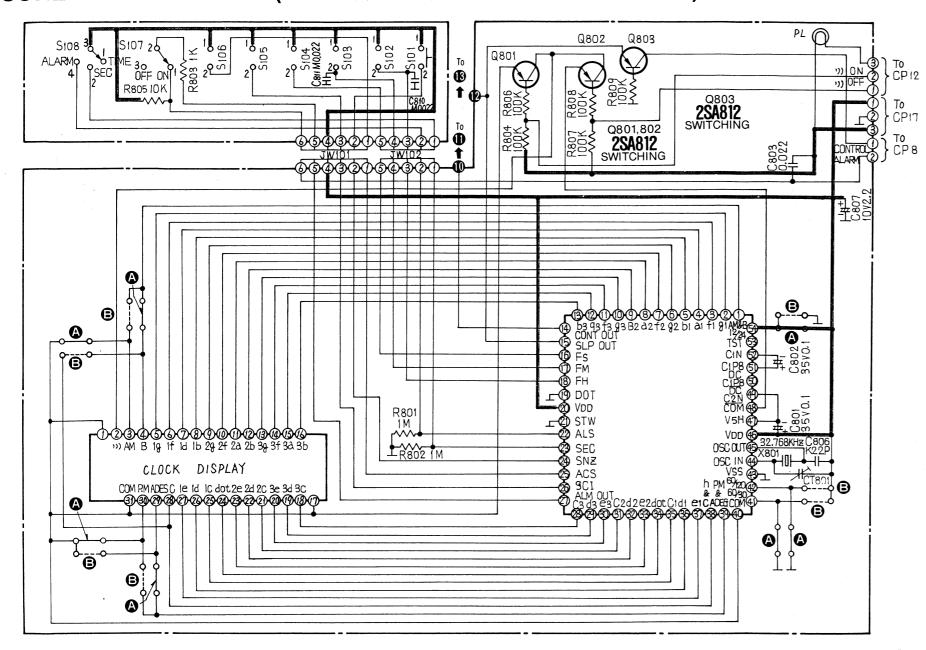


	10/31									10	32				
	SW5		SW5		SW5		SW5		SW5		SW5		SW5		SW5
1	5.0 V	4	-1.0V	7	5.0 V	10	4.6V	1	5.0V	4	-7.6V	7	5.0V	10	4.8 V
2	-14.1V	5	-4.3V	8	4.7V	11	5.3 V	2	-1.0V	5	-7.8V	8	5.1V	11	4.8V
3	-15.0V	6	-4.3V	9	4.7V	12	5.3V	3	-7.5V	6	-14.2V	9	4.8V	12	4.6V

■KEY BOARD CIRCUIT BOARD



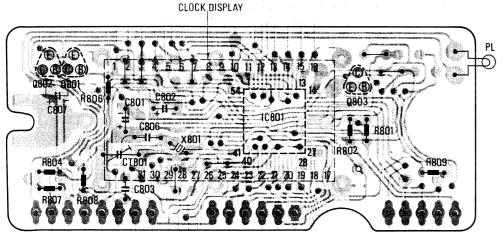
SCHEMATIC DIAGRAM (CLOCK & SWITCH CIRCUIT BOARD)



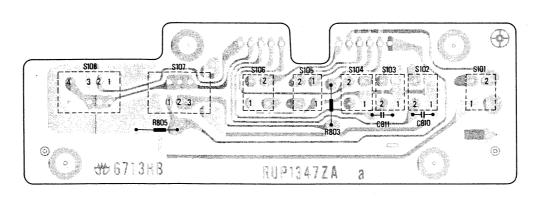
NOTE: The clock section is designed for 24H & 12H indication.

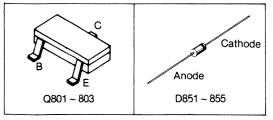
(a): 24H indication 3: 12H indication

■CLOCK CIRCUIT BOARD

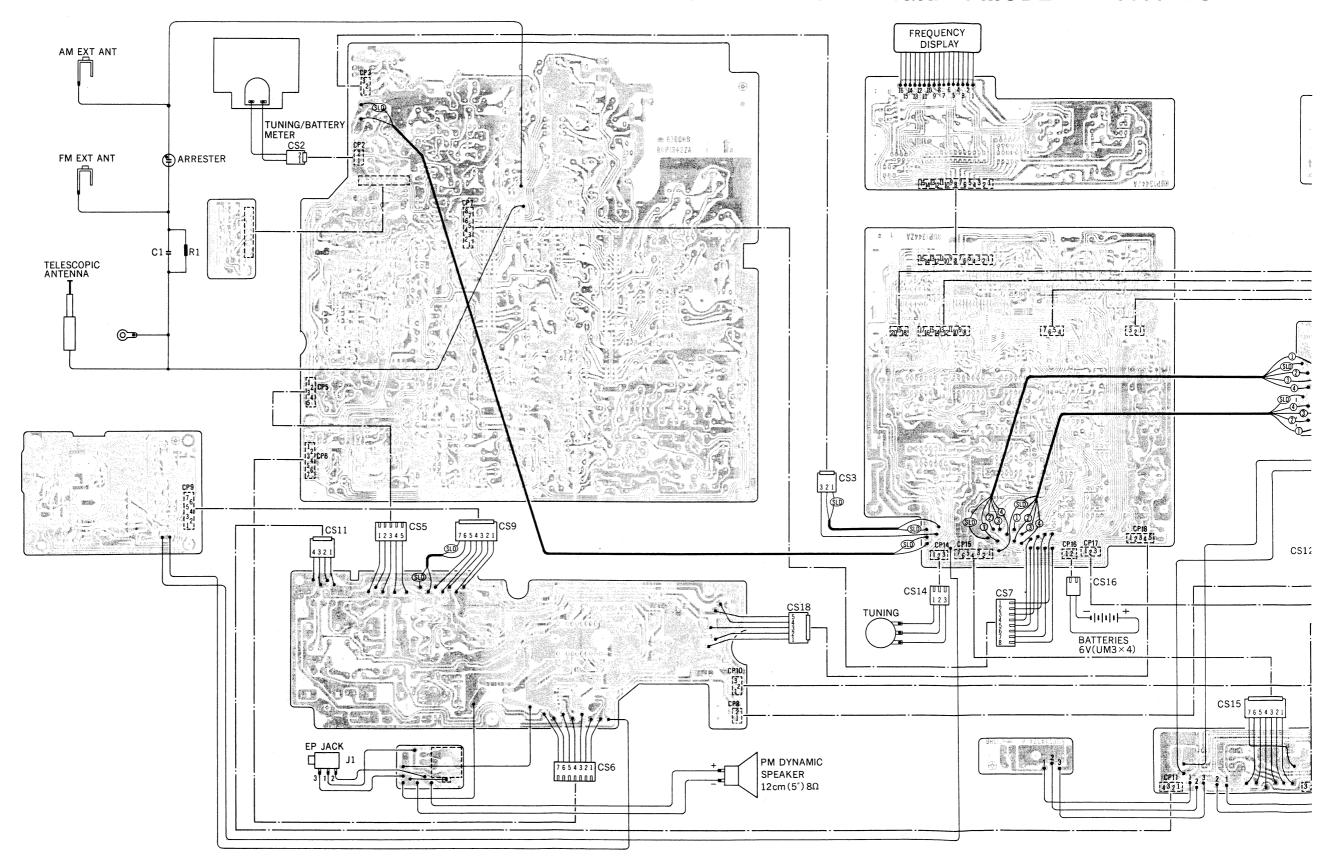


■SWITCH CIRCUIT BOARD (CLOCK)

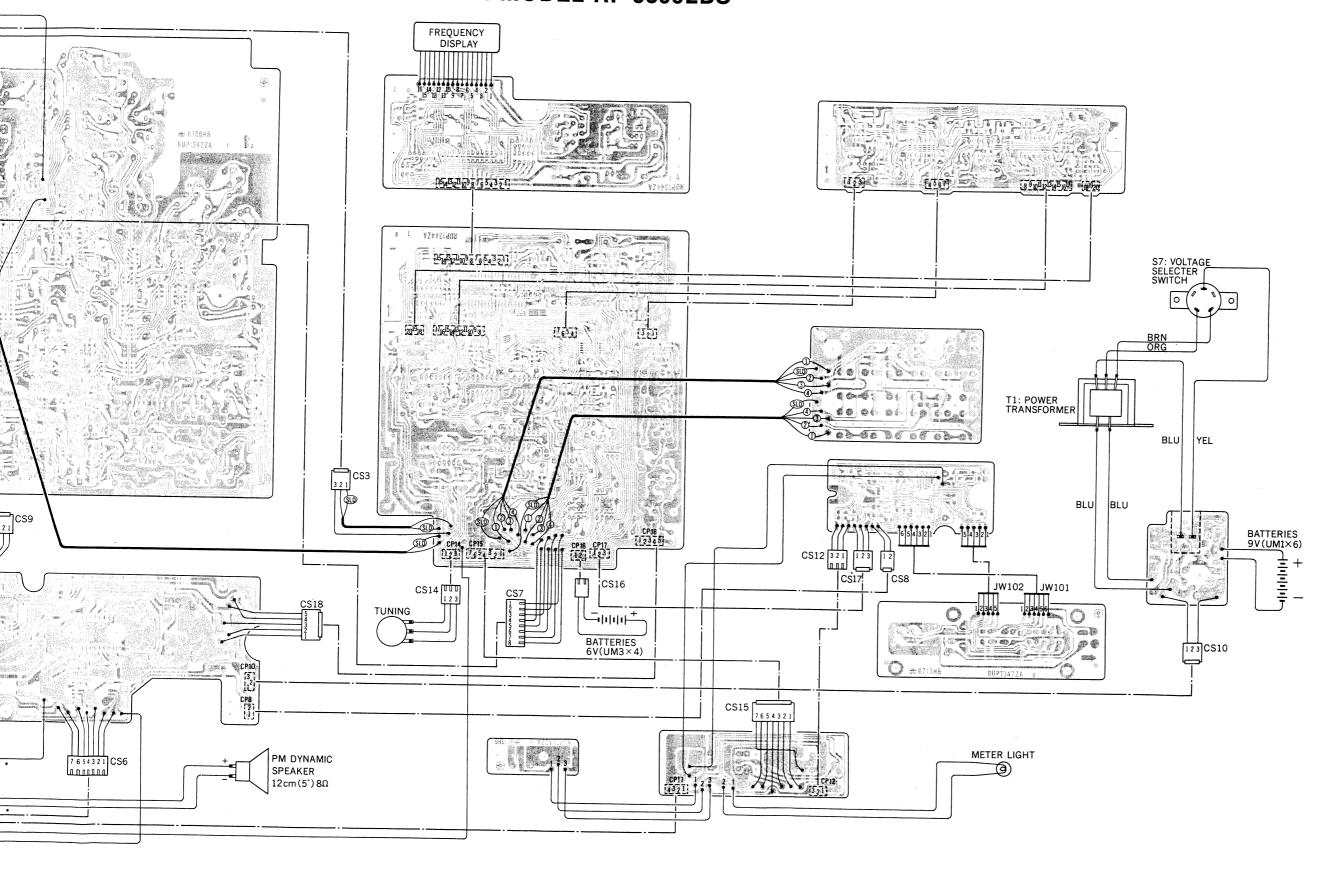




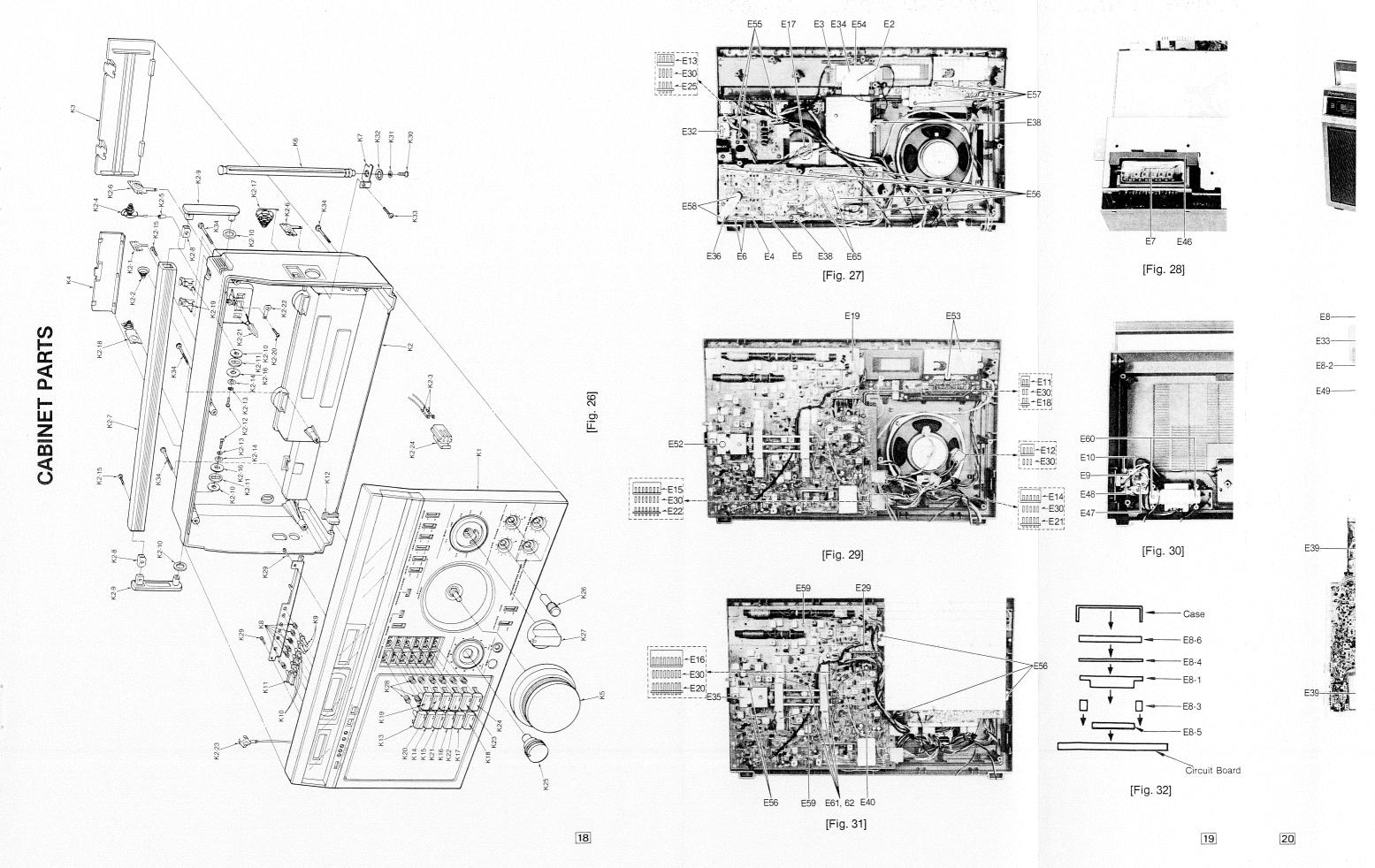
WIRING CONNECTION DIAGRAM MODEL RF-6300LBS



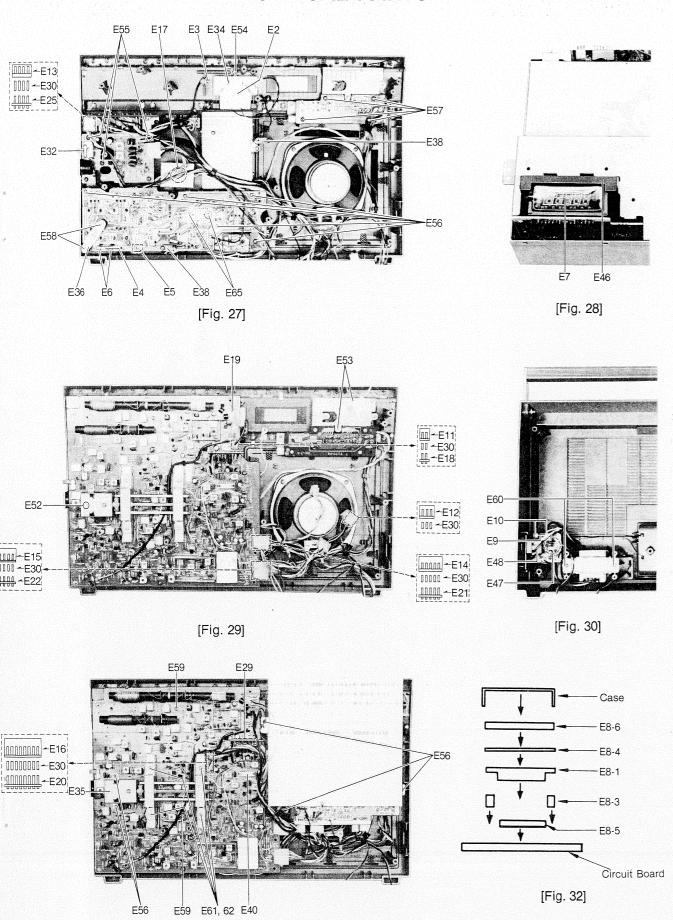
WIRING CONNECTION DIAGRAM MODEL RF-6300LBS



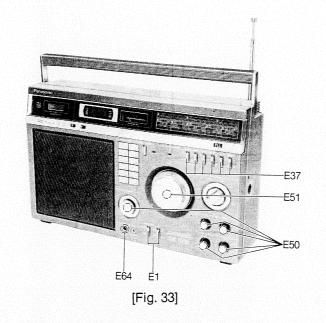
ELECTRICAL PARTS

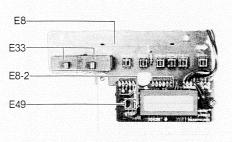


ELECTRICAL PARTS

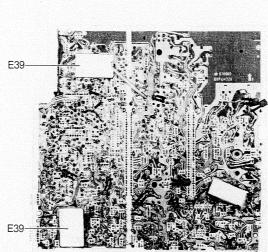


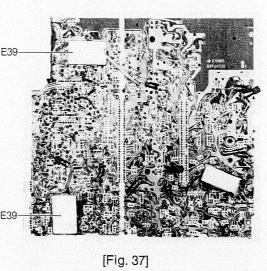
[Fig. 31]

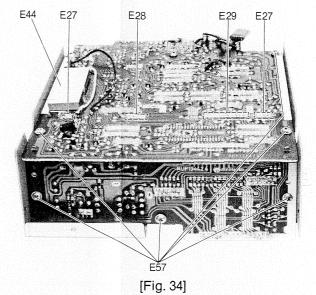


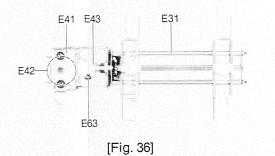


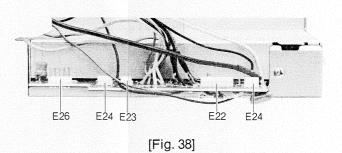
[Fig. 35]

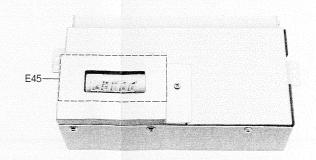












[Fig. 39]

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■ REPLACEMENT PARTS LIST Model RF-6300LBS Ref. No.

(RD81035193S2)

NOTES: 1. Δ indicates that only parts specified by the manufacturer be used for safety.

2. The S mark indicates service standard parts and may differ from production parts.

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
		INTEGRATED CIRCUITS,		
		TRANSISTORS AND DIODES		
C101	RVILA1210	IC	1	
C501	RVIMC14016B	IC	1	
	AN7911	IC	1	
	MN6147	IC	1	
	RVIMC4069UB	ic	2	
	RVIMC14001B	IC	3	1
	RVIMC4013B	IC	2	
C652	RVIMP4763	IC	1	
-	MN1203	ic	Ī	
		ic	. 2	
C751,752		ic	ĺ	
	RVILA4125	10	-	
	209,300,			
304,908,		Erangistor (Si)	7	
	2SK212	Transistor (Si)	'	
	210,312,317,			
323,324,		_ , , , , , , , , , , , , , , , , , , ,	_	
	2SC1359	Transistor (Si)	9	
103,104,	107,205,206,			
	302,306∿309,			
311,313,	314			
•	2SA838	Transistor (Ge)	16	
108,109	112,207,			
	902,906,			
907,951,				
, ,	2SC945	Transistor (Si)	11	
113,115,		,		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2SA564	Transistor (Ge)	4	
117,204,				
111,204,	2SC1684	Transistor (Si)	4	
202	2SK104	Transistor (Si)	li	1
303		Transistor (Si)	i	
305	2SC1583	Transistor (Si)	2	
501,502	2502295	Transistor (SI)	-	
503,509,	511,513,			
612,662,		managed (Ci)	8	
	2SC1623	Transistor (Si)	8	
	609,652~661,			
664,666,	751~753,801~8		1 22	
	2SA812	Transistor (Ge)	22	
663,668	909			
2000,000	2SD352	Transistor (Si)	3	1
1672	2SC1567	Transistor (Si)	1	
2672	2SD601	Transistor (Si)	1	
2671	2SC2001	Transistor (Si)	2	
2754,901	2802001	Transistor (Si)	1	,
	1	1	1 ī	1
0903	2SB544	Transistor (Ge)	-	1

Ref. No.	Part No.	Per Set	Remarks	
0953,954	2SC828	Transistor (Si)	2	
D101,102,		, ,		
	MA323RR	Diode (Si)	3	
D104,106,	201,			
202,663,			1	
	DA90	Diode (Ge)	6	
D107,108	MA27B1	Diode (Si)	2	
	209,211,212,			
	307√318,320,			
501,502,	602,603,609,		l i	
615,661,	664,665,751,			
752,904	907,909			,
	MA161	Diode (Si)	37	S
D601,604,	607			
	MA151WK	Diode (Si)	3	
D213	RVDKB265G	Diode (Si)	1	
D214	RVDSD113	Diode (Si)	1	S
D216∿219	20A90	Diode (Ge)	4	S
D301,302,	303			
	RVDKV1225S.	Diode (Si)	1	
D658,660,	753,903			
	RVDEQA0105T	Diode (Si)	4	
D662	RVDRD30EB2	Diode (Si)	1	•
D851∿855	SM112	Diode (Si)	5	S
D504,612,	617,651			•
	MA151WA	Diode (Si)	4	
D901,902	LN217RP	Diode (Ga)	2	
D908	MA27B2TA	Diode (Si)	1	
		CRYSTAL	-	
X201	RVCX3055NRN	Crystal (3.055MHz)	1	
	RVCA4500NZN	Crystal (4.5MHz)	1	
X801	RVCQ32N5Z1	Crystal	1	
		COILS AND TRANSFORMERS		
L101	SLA4N2	Antenna 1st Coil, FM	1	
	RLO4N134	Antenna 2nd Coil, FM	1	
	RLD4M10	Oscillator Coil, FM	1	
	RLO9M8	BFO Coil	1	
	RLO3M17	2nd Local Coil, SWl	1	
	RLF6F22	Antenna Coil, LW, MW	1	
	RLF3W2	Antenna 1st Coil, SW1	1.	
	RLA3M12	Antenna 1st, 2nd Coil, SW2	2	
	RLO3M12	Antenna 1st, 2nd Coil, SW3	2	
	RLA3N19	Antenna 1st, 2nd Coil, SW4	2	
	RLA3N21	Antenna Coil, SW5	1	
	RLO3M21	Antenna 2nd Coil, SWl	1	
	RLA3N20	Antenna 1st, 2nd Coil, SW5	1	
	RLO1M10	Oscillator Coil, LW	1	
L316	RLO2M27	Oscillator Coil, MW	1	1
L317	RLO3M25	Oscillator Coil, SWl	1	Į
L318	RLO3M24	Oscillator Coil, SW2	1	1
L319	RLO3M80	Oscillator Coil, SW3	1	
L321	RLO3N13	Oscillator Coil, SW4	1	
L322	RLO4N78	Oscillator Coil, SW5	1	
	RLE5023	Notch Filter, 2.5KHz	1	
L952				

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks	Ref. No.	Part No.		Part Name	& Description	Per Set	Remarks
			2		11		JACKS				
L953,954		Notch Filter, 5, 7.5KHz Power Transformer	1		J1	RJJ19Z	Jack,	Earphone		1	
	RLT5U13 RLI4M103	IF Trap, FM	ī		J2	RJJ108Y	"	Headphor		1	
T100 T101,102		IFT, FM	2		J3	QJS0329	"	AC/DC IN	I	1	Δ
T101,102	RLI2M402	Detector, AM	1		J4	RJS15A	"	DIN		1	
T201,203		IFT, AM	2				DEG 7.0	nong (**- 1	!- !- OTMG)		
T202,207,	208	·			1	116 122	RESIS	roks (val	ue is in OHMS)		
	RLI2M207	IFT, AM	3		R101,114,	146,239,					
	RLI9Ml	1st IFT, 2.6MHz	1		249,355,						
	RLI9M2	1st IFT, 2.6MHz	1			ERD25FJ221	220	1/4W	Carbon	11	s
1-00-	RLT9Z4	DC-DC Converter Transformer	1			8 ¹¹¹ ,115,139	Į.	1/311	carpon		J
T751	RLT9F2	DC-DC Converter Transformer	1			216,219,224,	ľ				
		VARIABLE RESISTORS				310,319,324,					
		Preset, $1k\Omega$ (B),				359,361,415,	1			İ	
VR101	EVNK4AA00B13	Meter Control	1			921,925,952					
VR901,902	0.05	Meter control	i - I			ERD25FJ103	10 k	11	u .	28	S
VK901,902	EVH7XAF20B54	Variable Resistor, 50kΩ (B),				236,257,259,					
	EVII / KAI ZODS4	Bass, Treble & BFO Pitch			306,308,	321,907,912,				Į	*
		Control	3		935,961,	962,209,290	l	_		١	_
VR903	EVH7XAF20D54	Variable Resistor, 50kΩ (D),				ERD25FJ472	4.7 k		"	15	S
		Volume Control	1		R104,318,	934,936,132	60.1		**	_	
VR904	EVH7XAF20A54	Variable Resistor, 50kΩ (A),	_ [11	ERD25TJ683	68 k			5	S S
		RF Gain Control	1		R338	ERD25FJ100	10 33	,,	77	1 2	S
1						ERD25FJ330	33				٥
		VARIABLE CAPACITORS	2		R304,305,	360,942,943 ERD25FJ470	47	ŧr	11	5	S
	RCV1PX10AGS	Trimmer Capacitor	4		R311	ERD25FJ182	1.8 k	77	H .	1	s
CT103,301		mutuus Ganagitan	5		R131	ERD25FJ820	82	"	**	l ī	S
	RCV1PX20AGS	Trimmer Capacitor Trimmer Capacitor	i			323,411,412,					
CT801	RCVTCX28		-		413,120						
CT304,306	,307,308,311∿					ERD25FJ101	100	"	"	9	S
314,310	√319,321√323 RCV1PX30AGS	Trimmer Capacitor	15		R303	ERD25FJ151	150	"		1	S
	KCVIFXJUKGD	TI I I I I I I I I I I I I I I I I I I	1		R107,117					_	_
		CERAMIC FILTERS]	ERD25FJ471	470	"	"	3	S
CF101~103	RVFCF10M12FR	Ceramic Filter	3		R931	ERD25FJ393	39 k	"	"	1 1	S
CF104	RVFCFU455JT5	Ceramic Filter	1		R128	ERD25FJ561	560	••		1	5
					R113,119						
		THERMISTER			312,906	ERD25FJ681	680	17	11	7	s
TH1	RRT302	Thermister	1		D121 126	153,155,200,	000			•	
		CDULYUD	 		11 ' '	230,242,243,					
ļ	a1070200	SPEAKER Speaker, 12cm (5"), 8Ω	1			,256,258,313,	1				
SP	EAS12P83GG	Speaker, 12cm (5), on	-			,336,344,352,					
		SWITCHES	1			404,639,803,				1	
C10.6	RSHX029Z	Switch, Selector	1			ERD25FJ102	1 k		11	27	S
S1∿6 S7	RSR4A04Y	" Voltage Selector	1	Æ	R143,400			_	_		
S8	Refer to J3	" AC/DC Selector	1 1		11	ERD25FJ152	1.5 k	: "	"	4	S
59,10	RSH2B18Z	" BFO & Band Width	2			,229,237,					1
S11√23	RSH1A20Z	" Cancel/Memory & Channel	13			407,138,				Ì	l.
S24	RSS42A	" Radio/Phone Selector	1		908,941		1, , ,		11	11	s
	EVQQ4R13K	" Clock	6		11	ERD25FJ222	2.2 }	. "		111	
S101°100	RSS2B23Z	" Chirp	1 1			322,328,944,					
S107	RSS3B11Z	" Clock Display	1		954,958	964,685	2 2 1	. 11	II .	9	s
	ESRK68S1	" Band Selector	2			ERD25FJ332	3.3 1		tt .	2	S
					R129,956	ERD25FJ392	3.9 1	•		-	
					ــــالـ	<u></u>	<u> </u>			<u>. </u>	



Ref. No.	Part No.	Р	art Name	& Description	Per Set	Remarks	Ref. No.	Part No.	P	art Name	& Description	Per Set	Remarks
111,114,								632,661,662, 904,922,951					
383,386,	618							ECEA50Z1	1	50V	Electrolytic	10	S
	ECKD1H102MD	0.001	50V	Ceramic	11			ECEA50Z2R2	2.2	"	"	2	S
	ECKD1H102ZF	0.001	"		2		C254,603,					1	
	108,133,138,	1					912,914,			"		_	a
	149,204,223,	1						ECEA50ZR1	0.1	"		6	S
	255,290,253,							ECEA50ZR33	0.33		•	2	S
	310,317,320,						C517	ECQE1335KZ	3.3	100V	Polyester	1 1	
	325,329,330,						C513	ECUX1H390KC	39 P	50V	Chip	1	
	384,389,406,						C514	ECUX1H820KC	82 P	"		2	
	335,851∿854				38			ECUX1H102ZF	0.001		11	1	
	ECKD1H103ZF	0.01	"		38		C524	ECUX1H222MD	0.0022			1	
	137,158,							604,612,614,					
	267,349,							651,654,656,				1	
78,525,					122		667,605		0.03	11	17	12	
	ECKD1H103MD	0.01	**	**	12		1 2510	ECUX1H103ZF	0.01	"	11	13	
241,246,			11	11	2		C519	ECUX1H103MD	0.01			1	
	ECKD1H682MD	0.0068		-	3		C502,504						
	206,233,						652,754		0.022	17	"	6	
	398,810,						1 0510 600	ECUX1H223ZF	0.022			2	
	291,617		25.7		12			ECUX1H223MD	100 P	11	Ħ	2	
	ECFTD223MD	0.022	25V		12			ECUX1H101KD	68 P	"	11	1	
	146,908,165	0 047	п	er ·	5		C678	ECUX1H680KC	680 P	"	Ceramic	1	
	ECFTD473MD	0.047	"		2		C657	ECKD1H681KB	33 P	**	Chip	1	
	ECFVD333MD	0.033					C653	ECUX1H330KC ECUX1H331KD	330 P	,,	CIIIP	1	
	926,257	470 D	50V	tr	4		C621		330 P			+	
	ECKD1H471KB	470 P		Comi Conductor	1		C503,609		0.001		11	3	
.45	ECFVD683MD	0.068	25V	Semi-Conductor	1		1 2000 670	ECUX1H102MD	0.001			٦	
326,327,	347,403	0 000	E 037	Ceramic	4		C628,670		0.0047		11	9	
	ECKD1H223MD	0.022	50V		2		ll _{ann} c	ECUX1H472MD	22 P	11	11	1	
	ECMS05560KH	56 P	**	Mica	2		C806	ECUX1H220KC	1000	6.3V	Electrolytic	2	s
	ECMS05680KH	68 P	**	**	1			ECEA0JS102 ECEA1CS221	220	16V	Electionythe	1	s
43	ECMS05820KH	82 P	11	m .	2		C658		33	35V	11	î	s
	ECMS05121JH	120 P	11	Polyester	li		C751 C659	ECEA1VS330 ECEA1HS470	47	50V	н	1	s
59	ECQG05473MZ	0.047 160 P	11	Mica	î		C322	ECEA50Z3R3	3.3	JU V	11	1	S
36	ECMS05161JH	130 P	**	MICA "	ı		C523,665		3.3			1	
51	ECMS05131JH	68 P	11	n	ī		1 (523,003	ECEALJS4R7	4.7	63V	17	4	s
11	ECMS05680JH	82 P	11	11	l ī		C409,521		3.7	051		-	
64	ECMS05820JH	470 P	125V	Styrol	l ī		1 0407,321	ECEA50ZR22	0.22	50V	17	3	s
52	ECQS2B471JZ	560 P	123	n n	1		C607	ECEA50ZR47	0.47	"	11	1	š
63	ECQS2B561JZ ECOS2B821JZ	820 P	**	II	l ī			ECCD1H270KC	27 P	*1	11	2	
54		1500 P	11	11	2		C154,163						
156,357 153	ECQS2B152JZ ECQS2B182KZ	1800 P	11	11	1		110137,103	ECKD1H222MD	0.0022	11	n	3	
53 58	ECQS2B162KZ ECQS2B222KZ	2200 P	11	It	ī		C244,269						
	202,266,	-=					11	ECCD1H331K	330 P	11	n ,	3	•
	400,940						C911	ECKD1H332MD	0.0033	11	m .	1	
10,333	ECEALCS330	33	16V	Electrolytic	8	S	C610,934						
FC 1C4		1 33	101			1	1100007334	ECQG05224MZ	0.22	**	Polyester	4	\
.56,164	171,663	1 47	10V	u .	4	s	C655,905						
	ECEALAS470	47	TOA		1 1	_	1 (033,303	ECEA1AS221	220	10V	Electrolytic	3	s
	166,227,229,				1		C669,921						
266,664	923,931	100	11	II .	و ا	s	1 0003,321	ECEALES101	100	25V	11	4	s
:12 606	ECEALAS101	100	50V	**	ž	5	C913.812	ECEALCS471	470	16V	n	2	s
212 600	ECEAlHS100	1	201		1		5 1		1000	- 11	ti .	2	S
770	ECCD1H331K	330 P	**	Ceramic	1		1 [0936,938	ECEA1CS102	1000			1 -	-

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks	Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
	7077100222	2200 16V Electrolytic	1	S	K26	RBN489X	Knob, Tone, BFO Pitch &		
	ECEA1CS222	0.047 50V Polyester	2	_	[[·	1	RF Gain	4	
953,954	ECQG05473KZ		4		K27	RBS173Z	Knob, Band Selector	1	
	ECQG05104KZ	0.1	i		K28	RUS2B	Spring, Preset Button	12	
	ECSF1AM225	2.2 10V Electrolytic	2		K29	XTN23+8C	Screw	2	
801,802	ECSF1VM104	0.1 35V "	2		K30	XSN3+8S	Screw	1	S
					K31	XWA3B	Washer	1	S
		CABINET PARTS					Washer	ī	S
1	RYMF6300LBS8	Front Cabinet Ass'y	1		K32	XWG3	ł	ī	J
	RYFF6300LBS7	Rear Cabinet Ass'y	1		K33	XTV3+12G	Screw	6	s
	RJC717A	Battery Terminal, Back-up + Side	1		K34	XTB3+35BFN	Screw	٥	5
		Battery Spring, Back-up - Side	1		.				
	RJC322Z		2				ELECTRICAL PARTS		
	RJT462Z	Terminal, Socket	ī		El	RYT1F6300LBS	Button Ass'y, Band Width & BFO	2	
-	RJC505Z	Battery Spring, - Side	1		E2	RSM1601Z	Meter	1	
	RJT398Y	Pipe, Battery Spring	7	1	E3	XAMR43S250A	Pilot Lamp	1	
2-6	RJC111Z	Battery Terminal, + Side	2	1	E4	XBA2C03TR0	Fuse	ī	A
	RKX206Z	Handle	1				1	1 1 2	
	RKX207Z	Spacer, Handle	2		E5	XBE10M96S	Fuse	2	l 🛣
	RKX180Z	Arm, Handle	2		E6	RJF7A	Fuse Holder	4	<u> </u>
	RNW824Y	Nylon Washer, Handle	4		E7	RAD5BT-11	Frequency Display	1	
	RHM58Z	Washer, Handle	2		E8	RSC19610Y	Clock Ass'y	1.	
			2	s	E8-1	RADLDBU122D	LCD	1	
	XSN3+8S	Screw	2 2	s	E8-2	XAMR87T25	Pilot Lamp	1 2	
	XWA3B	Washer	2	S	E8-3	RHG5003Z	Zebra	2	
2-14	XWG3	Washer	2	5		RHR1074Z	Spacer	1	
2-15	XTB3+8BFN	Screw	2	S	E8-4		Reflection Plate	ī	
	XWG3F13	Washer	2		E8-5	RDH158Z		1 1	
	RJC508Z	Battery Spring, - Side	1		E8-6	RGP562Z	Polarization Plate	1	A
	RJC730Z	Battery Terminal, + - Side	1		E9	XBA2C16TR0	Fuse		<u>^</u>
	RJF1065Z	Terminal, EXT ANT	2		E10	QTF1054	Fuse Holder	2	\ \tag{4.7}
			1		E11	RJS171Z	Socket (2P), CS2 & CS8	2	
	XTV3+10G	Screw	ī		E12	RJS253Y	Socket (3P), CS3, 10, 12, 14, 17	5	
	XANR2T20	Arrester	i		E13	RJS216Y	Socket (4P), CS11	1	
	RJT202B	Terminal	1		E14	RJS217Y	Socket (5P), CS5, 18	2	1
K2-23	RJT514Z	Terminal					Socket (7P), CS6, 9, 15	3	
K2-24	RJS171Z	Socket, 2 Pin	1		E15	RJS219Y		i	1
κ3	RYN1F6300LBS	Battery Cover Ass'y, Large	1		E16	RJS264Y	Socket (8P), CS7	i	
	RYN2F6300LBS	Battery Cover Ass'y, Small	1		E17	EWTXD4S2540B	Rotary Encoder		
K5	RYT2F6300LBS	Tuning Knob Ass'y	1		E18	RJP213Z	Plug (2P), CP2	1	
		Telescopic Antenna	1		E19	RJP137Z	Plug (3P), CP3 & CP12	2	
6	XEARS158HAY	Bracket, Telescopic Antenna	ī		E20	RJP171Z	Plug (8P), CP7	1	
(7	RMA151Z	graine Clock Minet	6		E21	RJP136Z	Plug (5P), CP5	1	
(8	RDS3052Z	Spring, Clock Adjust	2		E22	RJP135Z	Plug (7P), CP6, CP9 & CP15	3	
(9	RBC306Z	Button, Sleep & Cancel			E23	RJP241Z	Plug (2P), CP8 & CP16	2	
(10	RBC307Z	" Time Set	3				Plug (3P), CP10, CP14, CP17	3	
11	RBC308Z	" Doze	1	1	E24	RJP133Z		i	
12	RBC311Z	" Cancel/Memory	1		E25	RJP107Z	Plug (4P), CPl1	li	Ì
(13:	RBC312Z	" CH1	1		E26	RJP116Z	Plug (5P), CP18	1 7	
(14	RBC312Y	" CH2	1		E27	RJT665Z	Terminal, (3P)	2	
	RBC312X	" CH3	1		E28	RJT671Z	Terminal, (4P)	1	
(15		" CH4	l ī		E29	RJT668Z	Terminal, (10P)	2	
16	RBC312W		1		E30	RJT462Z	Terminal, Socket	62	
17	RBC312V	" CH5	1		E31	ESRK208F25A	Band Switch Shaft Ass'y	1	
(18	RBC312U	" СН6				RUV612Z	Cover, Radio/Phone Switch	1	
(19	RBC312T	" CH7	1	1	E32		Cover, Clock Display & Chirp	2	
(20	RBC312S	" CH8	1		E33	RUV613Z		1	
		" CH9	1	1	E34	RUS423Z	Spring, Meter Mtg		
	RBC312R	" CH10	1		E35	RDF865Z	Shaft, Band Selector	1	
	RBC312Q	Curo			E36	RKE350Z	Stay Shaft, P,C Board	1	
K22									
K22	RBC312P	" CH11	1				Button, Radio, Speed & etc.	6	
K21 K22 K23 K24		" CH11 " CH12 Knob, Volume	1 1		E37 E38	RBC300Z RHR1023V	Button, Radio, Speed & etc. Stay Shaft, P,C Board	6 2	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
39	RMC228A	Shield Plate	3	
40	RMC171Y	Shield Plate, IC101	1	
41	RMW201Z	Bracket, Band Selector	1	
	RDG5695Z	Gear, Band Selector	1	
42	RDG56962	Gear, Band Selector	1	
43	RMC736Z	Shield Plate	11	1
44	PGD 6717	Smoke Panel	1 1	
45	RGP671Z	Rubber, Frequency Display	1	
46	RHG1011Z	Rubber, Frequency Display	ī	\wedge
47	RUV387Z	Cover, Voltage Selector Switch Cover, AC/DC IN Jack	ī	*
48	RUV603Z	Cover, AC/DC IN Jack	l i l	443
49	RME259Z	Bracket, Lamp Holder	6	
50	XNS8	Nut		
51	XNS9FZ	Nut	1	_
52	XUC2FT	Circlip, Band Selector Shaft	1	S
53	XTN23+8B	Screw	2	s
54	XTV3+10G	Screw	1	
55	XTV3+12G	Screw	21	
55 556	XTV3+12GR	Red Screw	13	
	XTV3+12GK	Screw	41	
57	F	Screw	2	s
158	XTB3+35BFN		2	
59	XTW3+12QR	Red Screw	2	
60	XYER3+BG14	Screw	4	s
61	XSN3+5S	Screw	4	S
62	XWA3B	Washer	_	٥
63	XXAS3K5S	Screw	1	
64	XNS12D	Nut	1	
65	XYN3+F12	Screw	2	
		ACCESSORIES		
	XEH1A1-P	Earphone	1	S
	RJA20Z	Power Cord, AC	1	<u> </u>
	ROE13Z	Caution Tag	1	
	KQE132			
		PACKING MATERIALS	1	
	XZB60X50A04	Polyethylene Cover		
	XZB10X25A04	Polyethylene Cover	1	
	RPG2352Z	Packing Case	1	
	RPN9358Z	Pad	1	
	RPN3293Z	Pad	1	
	RPN3294Z	Pad	2	
	RPN3336Z	Pad	1	
	RPP401Z	Soft Cover	1	}
	KPP4012			
		PRINTED MATERIAL	1	
	RQX6642Z	Instruction Book	-	
	T.			
	\	1		
	1	1	1	1

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